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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/626,225 | 07/24/2003 | Naoyuki Enjoji | TOW-034RCE | 4543 |
| 959 7590 02/29/2008 LAHIVE & COCKFIELD, LLP ONE POST OFFICE SQUARE BOSTON, MA 02109-2127 | | | | |
| EXAMINER RHEE, JANE J | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1795 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/626,225

Applicant(s)

ENJOJI ET AL.

Examiner

JANE RHEE

Art Unit

1795

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
- Paper No(s)/Mail Date 11/28/07.
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Rejections Repeated

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shimotori et al.

As to claims 1, Shimotori et al. discloses a fuel cell formed by stacking a plurality of unit cells in a stacking direction (figure 3), wherein unit cells includes a first separator, a second separator and an electrolyte electrode assembly that is sandwiched between the first and second separators, the electrolyte assembly includes a pair of electrodes and an electrolyte interposed between the electrodes (figure 3 number 8a,8b,8c), wherein the electrodes have a substantially square shape having a side length in a range of 140mm to 200mm, the first and second separators have a substantially square shape having a side length in a range of 200mm to 300mm (col. 9 lines 36-38, also in col. 7 lines 41-44 it is well known in the art to provide square shaped electrodes and separators), the first separator has a reactant flow passage on a first surface facing the electrodes and a second surface opposite the first surface and the second separators

has a reactant gas flow passage on a first surface facing the electrodes and a second surface opposite the first surface (figure 10a number 24a,24b) and a coolant flow passage is formed along a substantial portion of the second surface of the first separator and second surface of the second such that a coolant flows along the substantial portion of the second surface of the first separator and the second surface of the second separator while a direction in which the reactant gas flows crosses a direction in which the coolant flows (figure 10a number 15, see also the coolant passages in figure 27b and 28b, number 102b).

As to “for supplying a reactant gas along the electrodes”, and “for supplying a coolant while in a direction in which the reactant gas flows crosses a direction in which the coolant flows” are intended uses. It has been held that a recitation with respect to the manner in which the claimed particle is intended to be employed does not differentiate the claimed article from a prior art article satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987)

As to claim 2, Shimotori et al. discloses a reactant gas supply passage and a reactant gas discharge passage extend through two parallel side portions of the first and second separators (figure 10 number 24a,24b), in the stacking direction, and a coolant supply passage and a coolant discharge passage extend through other two parallel side portions of the first and second separators in the stacking direction (figure 10a number 15) wherein the coolant supply passage is in fluid communication with the coolant discharge passage through the coolant flow passage (figure 10a number 15). As to claim 3, Shimotori et al. discloses that the centers of the electrodes are

substantially in alignments with the centers of the first and second separators (figure 3 number 10 and 8). As to claim 4, Shimotori et al. discloses that the reactant gas supply passage and the reactant gas discharge passage are formed symmetrically on a surface of the first and second separators (figure 10a number 24a,24b). As to claim 5, Shimotori et al. discloses a straight reactant gas flow passage connecting the reactant gas supply and the reactant gas discharge passage is formed on the surface of the first and second separators for supplying a reactant gas to the electrode (figure 10a number 11).

As to the limitation "the fuel cell stack being used for selectively forming a first assembly, second assembly, a third assembly, and a fourth assembly depending on conditions for installing the fuel cell stack in the vehicle, wherein...the fourth assembly is formed by arranging four fuel cell stacks in square shape in a front view such that the stacking direction is oriented substantially horizontally" is an intended use. It has been held that a recitation with respect to the manner in which the claimed particle is intended to be employed does not differentiate the claimed article from a prior art article satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987)

Response to Arguments

2. Applicant's arguments filed 8/10/07 have been fully considered but they are not persuasive.

In response to applicant's argument that Shimotori reference does not teach or suggest that "a coolant flow passage is formed along a substantial portion of the second surface of the first separator and the second surface of the second separator such that

a coolant flows along the substantial portion of the second surface of the first surface and the second surface of the second separator while a direction in which the reactant gas flows crosses a direction in which the coolant flows", Shimotori does teach a coolant flow passage is formed along a substantial portion of the second surface of the first separator and the second surface of the second separator such that a coolant flows along the substantial portion of the second surface of the first surface and the second surface of the second separator while a direction in which the reactant gas flows crosses a direction in which the coolant flows in figure 10a number 15 because the top portion and bottom portion of the separator where number 15 is located is considered as the 'substantial portion' of the second surface of the first and second separators.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1795

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JANE RHEE whose telephone number is (571)272-1499. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jane Rhee/
Primary Examiner, Art Unit 1795
2/20/08